SOUTH FLORIDA WATER MANAGEMENT DISTRICT

2004

South Florida Water Management District
ANNUAL AGENCY REUSE REPORT

sfwmd.gov

For additional information or clarification related to this report, please contact:

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Introduction

Water reuse is a safe and effective way to save water and offset potable water use. Water reuse has become an integral part of water and wastewater management in Florida and Florida is recognized as a national leader in water reuse. The encouragement and promotion of water conservation and reuse of reclaimed water are state objectives and considered to be in the public interest as established in Sections 373.250 and 403.064 of the Florida Statutes (F.S.).

Section 403.0645(3), F.S., directs use of reclaimed water at state and water management district facilities to the greatest extent practicable. To enable monitoring of progress, agencies are required to submit "Annual Agency Reuse Reports" to the Florida Department of Environmental Protection (FDEP) that summarize their activities to utilize reclaimed water at its facilities, and encourage and promote reuse within their jurisdictional areas. This report serves as the first South Florida Water Management District (SFWMD or District) annual agency reuse report. The report format follows the December 2004 *Guidance for Preparing Annual Agency Reuse Reports* developed by the FDEP.

SFWMD Reuse Program

Water Reuse for Golf Course Irrigation

The SFWMD strongly supports water conservation and diversification of water resources in order to meet the water needs of the region. Reclaimed water is an integral part of the District's water conservation program and is an important water supply alternative. To promote reuse, the District has developed a comprehensive approach that involves water supply planning, funding, regulation and outreach and education. The SFWMD has completed four regional water supply plans encompassing the District. Each plan contains region specific recommendations on the use of reclaimed water. The District requires all applicants for water use permits to evaluate the feasibility of implementing water reuse, and the District coordinates its reuse activities at the state, local and water user levels.

Complementing the water supply planning and regulatory activities, the SFWMD offers two funding programs that have provided funding for many reuse projects over the past decade. Water reuse is also being evaluated in the Comprehensive Everglades Restoration Plan (CERP). In addition, the SFWMD, along with other state agencies and the U.S. Environmental Protection Agency joined forces in executing a Statement of Support for Water Reuse in Florida showing support for

water reuse and a commitment to work together to encourage and promote water reuse in Florida. In 2003, almost 220 MGD of reclaimed water were reused on average within the District.

1. Actions to Increase Reclaimed Water Use at SFWMD Facilities

The SFWMD spans 16 counties with a total population of more than seven million residents. This geographic region covers 17,930 square miles and includes vast areas of agricultural lands, water conservation areas and areas of enormous urban growth and development. The SFWMD includes all or part of the following 16 counties: Broward, Charlotte, Collier, Miami-Dade, Glades, Hendry, Highlands, Lee, Martin, Monroe, Okeechobee, Orange, Osceola, Palm Beach, Polk and St. Lucie.

The District is headquartered in West Palm Beach. The District also has eight regional service centers in Okeechobee, Orlando, Stuart, Miami, Ft. Lauderdale, the Florida Keys, Ft. Myers and Naples. In addition, the SFWMD has seven field stations, over 200 pumping stations and 1,800 miles of canals located throughout the District. Most of these facilities are not irrigated and are located in rural areas where reclaimed water is not available. In 2004, evaluation of water reuse was initiated at the District headquarters and the Lower West Coast Service Center along with a canal recharge study using reclaimed water.

District Headquarters. The SFWMD met with Palm Beach County Water Utilities about making reclaimed water available to the headquarters complex, as well as other users in the vicinity. The closest wastewater treatment plant is the East Central Regional Wastewater Facility, located over 6.5-urbanized miles away. This facility does not currently produce reclaimed water for public access irrigation. It was concluded that construction of a reclaimed water pipeline from this facility is not practical. However, the county is gathering information on "sewer mining" as a potential way to make reclaimed water available to the headquarters facility and vicinity.

Lower West Coast Service Center. The irrigation system at the Lower West Coast Service Center is in the process of being connected to the City of Fort Myers reclaimed water system. Water reuse along with signage and interpretive exhibits will occur after connection to the reclaimed system.

Canal Recharge Study. In 2004, the Legislature found that groundwater levels in southeast Florida could benefit from augmentation; and discharge of reclaimed water into canals and the aquifer system may provide an environmentally acceptable means of supplementing water supplies and enhancing natural systems. However, the water quality and quantity issues associated with canal recharge need to be better understood and resolved. The FDEP, in conjunction with the SFWMD and stakeholders, initiated the Canal Recharge Study in 2004 to identify

and address issues associated with canal recharge. This study will be completed in 2006.

2. SFWMD Activities to Encourage and Promote Reuse

The District promotes and encourages water reuse in many ways, including strategic planning, funding programs, use of District rights of way for reclaimed water pipelines, regulation, collaboration and coordination, affiliation with professional organizations and conducting feasibility studies.

Strategic Planning

In 2004, the SFWMD completed its 2004 Strategic Plan, a roadmap to guide the District throughout the next decade in carrying out mandates to manage and protect water and land resources. To achieve its mission, the District identified specific implementation and evaluation strategies within its ten programs. One of the water supply program strategies is to provide funding and regulatory incentives to encourage water users to promote efficient use of water resources through conservation and reuse and to increase diversity of water supplies by developing alternative sources, such as reclaimed water.

Funding Programs

The District offers two cost-share funding programs to encourage development of alternative water supplies and efficient use of water, including reclaimed water.

Alternative Water Supply Funding Program. The Alternative Water Supply (AWS) Funding Program is a cooperative funding program that funds up to 50 percent of the total cost of capital improvement projects that help develop safe and cost-effective alternative water supplies. Since 1996, about 170 AWS projects have shared $34 million in District funding using this program. Almost half of the funded AWS projects involved reclaimed water. In fiscal year (FY) 2004, this program granted $1.7 million to 14 reclaimed water projects.

Water Savings Incentive Program. Since 2002, the Water Savings Incentive Program, or WaterSIP, has been used to cost-share implementation of technology based water conservation projects that save water through urban water demand reduction. The program focuses on funding non-capital projects, such as installation of rain shut-off devices for irrigation systems and plumbing retrofits. Several communities within the District have used WaterSIP funding to retrofit their irrigation systems to use reclaimed water. In FY 2004, no WaterSIP projects were funded that involved reclaimed water. However, in FY 2005 (beginning October 2004) three WaterSIP projects were funded involving the use of reclaimed water.

Use of District Rights of Way

The use of District canal and levee rights of way for utility lines, including reclaimed water pipelines, is allowed as an appropriate compatible public use.

Regulation

Within the SFWMD, all water use permit applicants are required to address the use of reclaimed water as part of obtaining a permit for water use. For water users, this involves an evaluation of using reclaimed water as a water source. For public water suppliers, who directly or indirectly control a wastewater treatment facility, this entails implementing a feasible reuse program. District rules governing the consumptive use of water are set forth in Chapter 40E-2 of the Florida Administrative Code and the District's Water Use Basis of Review, Sections 3.2.3, 3.2.3.1, 3.2.3.2 and 3.2.3.3.

The District issues water use permits with durations of up to 20 years. One factor considered in determining the duration of a permit is the development of alternative water sources, including use of reclaimed water.

Collaboration / Coordination Efforts

This District has several collaboration and coordination efforts including water supply planning, coordination activities and presentations in various forums.

Water Supply Planning. The SFWMD develops long-term comprehensive regional water supply plans to provide for current and future water use, while protecting south Florida's water resources. The planning process identifies areas where historically used sources of water will not be adequate to meet future demands and evaluates several water source options to meet the deficit. These plans contain region specific recommendations on the use of reclaimed water.

Coordination. The District facilitates and participates in reuse activities with local governments, utilities and water users through meetings and workshops. These forums provide an opportunity to coordinate proposed reuse programs with water management programs and to engage dialogue between reclaimed water suppliers and users.

Presentations. To promote water management programs related to reuse, the District frequently gives presentations on water reuse to homeowner's associations, professional organizations, local elected bodies and others. In 2004, the SFWMD participated in several water resource conferences that addressed reuse including: the 29th Annual Water Management Conference; 2004 Florida Chapter of the American Planning Association (FAPA) Annual Conference; 2004 American Water Works Association (AWWA) Annual Conference and

Exposition; 2004 AWWA – Conservation, Reuse, Water Resources Conference; 2004 AWWA Satellite Conference – Water Resource Alternatives: The Future of Sustainable Utility Practices; and the 2004 Florida Water Resources Conference – Integrating Water Resources for Florida's Future Water Reuse and Conservation.

Affiliations / Subscriptions / Memberships

The District serves on numerous state and national committees related to conservation and reuse. These include:

WateReuse Foundation: The District is a Subscriber to the WateReuse Foundation (http://www.watereuse.org/Foundation), whose mission is to conduct and promote applied research on the reuse, reclamation and desalination of water. The SFWMD Water Supply Department Director, Carlyn Kowalsky, serves on the WateReuse Foundation Board of Directors.

WateReuse Association: The SFWMD is also an Affiliate Member of the WateReuse Association (http://www.watereuse.org/). The WateReuse Association's mission is to advance the beneficial and efficient use of water resources through education, sound science and technology using reclamation, recycling, reuse and desalination for the benefit of the public and the environment.

Statewide Reuse Coordination Committee: The SFWMD is a member of the Statewide Reuse Coordinating Committee. This committee, consisting of representatives from several agencies in the state, coordinates reuse efforts and issues on a statewide basis.

Reuse Studies

In addition to cost-share funding, the District participated in and provided funding for several regional reuse studies and projects in 2004.

Lower West Coast Regional Irrigation Distribution System. In the Lower West Coast (LWC) Planning Area, a consortium of six utilities (Lee County, Collier County, Cape Coral, Fort Myers, Bonita Springs and Naples) are working together to build a regional irrigation distribution system (RIDS), which will increase the use of reclaimed water, primarily for irrigation. As a network of interconnected pipes and storage facilities, RIDS will allow communities to share reclaimed water, vastly reducing their draw on the region's freshwater supply. The District funded $298,465 for the LWC RIDS project in 2004.

Coconut Creek Reuse Study: The SFWMD provided $250,000 to the City of Coconut Creek (Broward County) to conduct a feasibility study to implement water reuse at city facilities, as well as for other water users.

Polk County Reuse Transmission Line Project. The SFWMD is partnering with Polk County on a project to construct this reuse pipeline in a rapidly developing area in northeast Polk County. The District is providing $80,000 for this project.

Comprehensive Everglades Restoration Plan (CERP) – Wastewater Reuse Technology Pilot. The Comprehensive Everglades Restoration Plan (CERP) includes projects involving the advanced treatment of wastewater. Development of the Wastewater Reuse Technology Pilot project continued in 2004 to address water quality issues associated with discharging reclaimed water into natural areas, Biscayne National Park and coastal wetlands.

3. Public Education and Information

The District considers the interests and concerns of water users, the environment and stakeholders as vital and encourages full participation in developing water resource management programs.

Brochures. The SFWMD makes available Reuse and Alternative Water Supply brochures (see Appendix A) at the SFWMD facilities and Web site.

Reuse Webpage. The SFWMD provides a Web site for water reuse, available from: http://www.sfwmd.gov/org/wsd/wsconservation/waterreuse.html

Service Center Activities. The SFWMD regional service centers are working with utilities and municipalities to promote and encourage participation in the Alternative Water Supply and Water Savings Incentive funding programs.

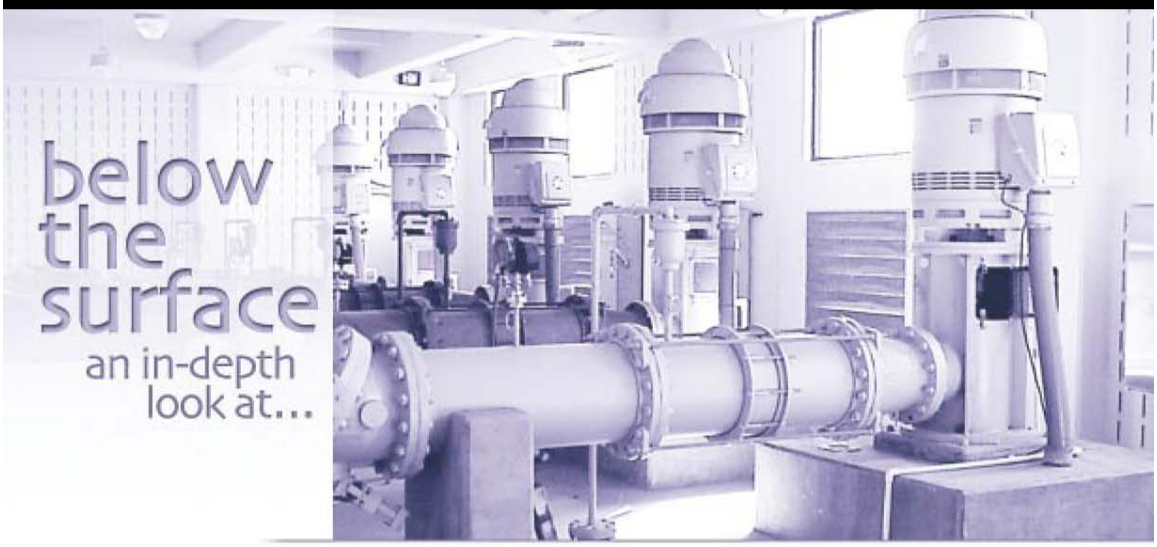
4. Reclaimed Water Uses within the District

As previously stated, the SFWMD has met with Palm Beach County Utilities to discuss the feasibility of using reclaimed water at its headquarters location in West Palm Beach. Although the District does not presently use reclaimed water at any of its owned, operated, occupied or controlled facilities, the use of reclaimed water throughout the District is playing a vital role in meeting a portion of water demand in south Florida.

In 2003, within the SFWMD service area, there were 110 wastewater facilities that reused about 220 MGD of reclaimed water for a beneficial purpose (FDEP, 2004). This reuse accounted for 27 percent of the wastewater treated in the District.

Appendix A: Promoting and Encouraging Reuse

SOUTH FLORIDA WATER MANAGEMENT DISTRICT



Water Reuse:

A safe and effective way to save water

ON THE INSIDE

- Reclaimed water and reuse explained
- Reuse success stories
- Reuse on a regional level
- How water is reclaimed

The demand for water by growing urban populations and agricultural operations is predicted to increase significantly in the coming years. Ground water and surface water, which have historically provided these needs, will not be sufficient to satisfy all future demands. Meeting this growing thirst hinges on our efforts to develop alternative water sources. This brochure looks at one of the ways to conserve our water resources — reclaiming water for reuse.

Consider what happens to the water we use inside the home. Once down the drain, this water is piped to the local wastewater treatment plant where it undergoes treatment to meet state standards for disposal. Historically, most of the water was disposed by injecting the water deep underground or by discharging to surrounding waters or to the ocean. This is a wasteful way to treat such a valuable resource.

More and more communities are finding that wastewater need not be wasted at all. They're reclaiming this water for irrigation of residential lots, golf courses, sports fields and orange groves, industrial

Reclaimed water sign in Collier County.

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The color purple is used to identify pumps, tanks and pipes carrying reclaimed water for reuse. The photo above and on the cover shows a reuse pump station in Collier County.

cooling, car washing, fire protection and ground water recharge.

Reuse is also beneficial to the environment. During times of drought, reclaimed water is an excellent source of water because its availability is not dependent on rainfall. The use of reclaimed water is currently exempt from water shortage restrictions.

What Is Reclaimed Water and Water Reuse?

Water use with reclaimed water is the use of highly treated domestic wastewater for beneficial purposes, such as: irrigation of yards, agriculture, golf courses, play grounds, and other green space; industrial purposes such as cooling water and process water; ground water recharge; toilet flushing; dust control and environmental restoration. Reuse reduces the reliance on ground water, surface water and potable water for these uses.

Is It Safe to Use Reclaimed Water?

Yes. The Florida Department of Health has found that reuse poses no threat to public health. Continuous monitoring of reclaimed water, required by the Florida Department of Environmental Protection, ensures excellent water quality for protection of the public and the environment.

Success Stories

The map to the left shows locations where reclaimed water is being utilized within the 16-county boundary of the South Florida Water Management District. The dots represent over 100 wastewater facilities that are reusing over 190 million gallons per day (mgd) or 25 percent of the total wastewater treated. For now, the rest of the wastewater (510 mgd) is being sent to the ocean or injected 3,000 feet underground, primarily in Palm Beach, Broward and Miami-Dade counties. This is water that could be reclaimed for reuse.

- **Broward County Waste-to-Energy Facility** – This north Broward solid waste facility uses over 1 mgd of reclaimed water for boiler cooling. The reclaimed water comes from the Broward County North District Wastewater Treatment Plant.
- **Cape Coral** – Reclaimed water is irrigating over 27,000 residences as part of the city's Water Independence for Cape Coral (WICC) campaign. Canal water is used to supplement reclaimed water to meet the 22 mgd system demand.
- **City of West Palm Beach** – Almost 10 mgd of reclaimed water will be flowing from the East Central Regional Wastewater Treatment Facility to restore approximately 1,400 acres of wetlands and recharge the city's adjacent wellfield. The system will be operational in 2003.
- **Collier County** – About 15 mgd of reclaimed water is used for irrigation of 3,500 residences, 21 golf courses, and 10 parks.
- **Conserv II** – This award-winning project serves portions of both Orange County and the City of Orlando. Highly treated reclaimed water is piped about 20 miles west of Orlando and is used to irrigate about 8,000 acres of citrus crops and to recharge ground water via 1,600 acres of rapid infiltration basins. The system is reusing almost 26 mgd.
- **Loxahatchee River Environmental Control District** – Located in Jupiter, this facility is reusing over 5 mgd of reclaimed water for irrigation of 11 golf courses and the Abacoa Development green space and residential lots.
- **Palm Beach County** – The Southern Region Water Reclamation facility is reusing over 5 mgd of reclaimed water for irrigation of 3,300 residences, four golf courses and one park, and for environmental enhancement at the Wakodahatchee wetlands.
- **Reedy Creek Improvement District** This utility provides reclaimed water for

OTHER SUCCESSFUL REUSE UTILITIES IN OUR DISTRICT

Boca Raton
Bonita Springs
Clewiston
Fort Myers
Gulf Utilities
Hollywood
Homestead
Immokalee
Indiantown
Kissimmee
Lee County
Lehigh Acres
Marco Island
Martin County
Miami-Dade North District
Miramar
Naples
North Fort Myers
Okeechobee
Orange County
Poinciana
Pompano Beach
Port St. Lucie
Royal Palm Beach
St. Cloud
Sanibel
Seacoast
South Central Regional
(Boynton Beach/Delray Beach)
South Martin Regional
(Hobe Sound/Jupiter Island)

irrigation of the landscaped areas in the Walt Disney World Resort Complex. Five golf courses, landscaped areas at five hotels, highway medians, a 110-acre tree farm, and a water park are irrigated with reclaimed water. A network of 85 rapid-infiltration basins is used for ground water recharge. Almost 5 mgd of reclaimed water is used for irrigation while 6 mgd is used for ground water recharge.

Does the SFWMD Help Fund Reuse Projects?

The District provides financial assistance through the Alternative Water Supply Funding (AWS) program to local entities in developing local reuse initiatives. The District has contributed over $30 million in the past six years to 100 AWS projects through its annual grants program. (See back page for contact information on grant application.)

Reuse on a Regional Level

The District has embarked on several regional applications of reclaimed water pursuant to its regional water supply plans to meet the regions future water needs:

Kissimmee/Orlando Area - The District is working with utilities in Orange and Osceola Counties to optimize the use of reclaimed water to offset withdrawals from the Floridan aquifer and avoid potential harm to the ground water resources. The District is also investigating the feasibility of storing reclaimed water in the Floridan aquifer as a form of aquifer recharge.

Collier, Lee, Martin Counties/ Northern Palm Beach County - These areas have a very high percentage of reuse. The demand, especially for irrigation, has grown beyond what can reasonably be supplied by traditional ground water sources and reclaimed water sources. There is a waiting list of users for reclaimed water. Utilities and the District are working together to maximize the use of reclaimed water. This includes interconnecting reclaimed water systems, developing supplemental sources of water and storage, and construction of regional irrigation distribution systems.

Groundwater recharge basins in Orlando.

Ft. Myers city nursery using reclaimed water.

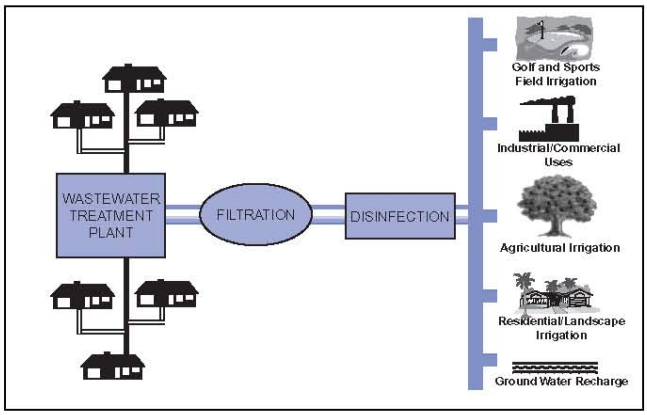
Wetland created with reclaimed water in south Palm Beach County.

Freeze-proofing plants with reclaimed water in Orlando.

Reclaimed water for golf course irrigation in Palm Beach Gardens.

Miami-Dade, Broward, Palm Beach Counties - Miami-Dade, Broward and Palm Beach counties make up the Lower East Coast urban corridor. During the dry season, these counties depend on water from the Everglades and Lake Okeechobee system to maintain urban drainage canal levels to recharge the Biscayne aquifer (the source of their drinking water) and to protect against saltwater intrusion into the aquifer. The District is investigating the feasibility of using reclaimed water to do the same job – called indirect aquifer recharge. This would reduce the demand on the regional system and improve Everglades/Lake Okeechobee restoration efforts.

Everglades Restoration - The use of reclaimed water is being evaluated as part of the Comprehensive Everglades Restoration Plan (CERP). As much as 200 mgd of reclaimed water could be used to reduce seepage from Everglades National Park and increase freshwater flows to Biscayne Bay and coastal wetlands.



This diagram follows the process of turning residential wastewater into reclaimed water for reuse. Separate pipes carry wastewater to the treatment plant where it undergoes treatment, including filtration and disinfection before it can be distributed. Reuse eliminates the dependence on potable water, surface water or ground water for these uses.

– FOR WATER REUSE INFORMATION –
Mark Elsner (561) 682-6156 or melsner@sfwmd.gov

– INFORMATION ON ALTERNATIVE WATER SUPPLY GRANTS –
Jane Bucca (561) 682-6791 or jbucca@sfwmd.gov

The South Florida Water Management District is a regional, governmental agency that oversees the water resources in the southern half of the state. It is the oldest and largest of the state's five water management districts.

Our Mission is to manage and protect water resources of the region by balancing and improving water quality, flood control, natural systems, and water supply.

This "Below the Surface" publication on Water Reuse directly supports our mission of water supply.

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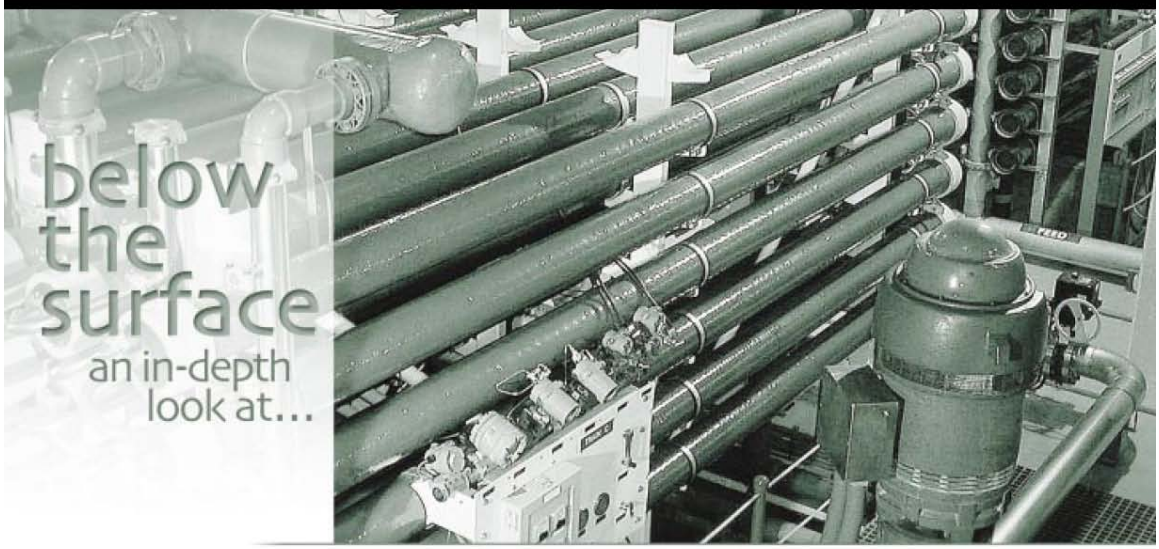
DID YOU KNOW?

- Almost 42,000 residences, 141 golf courses, 67 parks, and 13 schools are using reclaimed water for irrigation within the boundaries of the South Florida Water Management District.
- Reclaimed water doesn't smell or stain sidewalks and driveways like well water or canal water.
- Nature is the ultimate reuser of water. Through what is called the "hydrologic cycle," today's rainfall is the same water recycled over millions and millions of years.
- An average of 575 million gallons a day of reclaimed water is reused every day in Florida. Most of this reuse occurs within the 16-county area of the South Florida Water Management District.
- Collier County reuses over 125 gallons per day per person of reclaimed water — the most in the state.
- Users of reclaimed water are currently exempt from restrictions imposed during water shortages.
- Wastewater flows within the District's boundaries are projected to increase to over 1.3 billion gallons a day by 2020.
- Eighty percent of wastewater treated in the District is in Palm Beach, Broward, and Miami-Dade counties. Of that, only 9 percent is reused.
- Putting reclaimed water to beneficial use is "Recycling at its Best."
- mgd = million gallons per day

Florida's Water
It's Worth Saving

EN05/15/02

SOUTH FLORIDA WATER MANAGEMENT DISTRICT



below the surface
an in-depth look at...

Alternative Water Supply – GRANT PROGRAM

ON THE INSIDE

- Projects accomplish District goals
- Funding requirements
- Project selection process
- Project ranking criteria
- Funding timelines

As part of our mission to promote water conservation, the South Florida Water Management District offers grants to those entities willing to develop cost-effective, safe and appropriate alternative water supplies. Using alternative water resources can greatly offset the growing demand on our natural supplies of freshwater.

Large photo above: Reverse Osmosis Treatment
photo above: Aquifer Storage and Recovery
photo right: Reclaimed Water

South Floridians work and play in a sunny, subtropical climate that continuously beckons more residents to the region. Unprecedented growth and development in recent years coupled with the protection and restoration of our natural resources, have presented water managers with bold challenges to provide water supplies for ever-increasing demands. The probability of multi-year droughts further magnifies the need to explore enhanced water supply options.

Our 16-county region encompassed by the South Florida Water Management District is totally dependent on rainfall for its freshwater supply. While regional rainfall totals typically average 50-60 inches a year, the amount of rain greatly varies from one area of the region to another. Actual data spanning nearly a century show that total annual rainfall amounts have varied as much as 20 inches above or 20 inches below average figures. These extremes, sometimes evidenced by flood and drought, require great diligence when planning for future water supply for the entire region. Recent water supply plans have concluded that historically used freshwater sources will not be sufficient to meet all the future water needs of South Florida.

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The Florida legislature established the Alternative Water Supply Grant Program in 1995, s. 373.1961(2), F.S. The South Florida Water Management District has cooperatively funded a total of 97 projects since 1995 with $22 million in tax revenues, making over 200 million gallons of water available.

An important step in water supply planning and implementation involves investigating and developing alternative water resources to offset increased use of fresh ground and surface water. In 1995, the Florida Legislature directed the state's five water management districts to share revenues from property tax assessments with public and private entities willing to develop suitable alternative water supplies. Accordingly, the South Florida Water Management District offers cooperative funding grants which fund up to 50% of the total cost of projects that help implement safe and cost-effective alternative water supply. Funded projects have included:

- **Use of Saline Water Sources –** Making brackish water from the Floridan Aquifer available for drinking water.
- **Aquifer Storage and Recovery –** Recovering water stored in the aquifer during the wet season.
- **Large-Scale Landscape Irrigation –** Making water available for large-scale uses such as golf course irrigation. Projects have included redaimed water use, rainwater capture systems and reverse osmosis.

Public utilities, municipal, industrial and agricultural water users, and private users such as major shopping malls and large homeowners' associations are invited to participate in grant opportunities. The program funds capital projects that use innovative methods to counterbalance increasing demands on our region's limited freshwater supplies. Examples of specific projects that have been successfully implemented in our 16-county region are shown in the table below.

Entity	Project Name	Project Description
Quail Ridge Property Owners Association – Palm Beach County	Reclaimed Water System Expansion	Reclaimed water from the Boynton/Delray South Central Regional Wastewater Treatment & Disposal Board is used for irrigation of the entire development.
City of Cape Coral – Lee County	Gator Slough Reuse System Enhancements	Reclaimed water supplemented with surface water from local canals is used for irrigation of over 27,000 homes. The expanding project has been funded almost yearly.
Lee County	Fiesta Village Reuse	Fiesta Village wastewater treatment plant lacks users for all its reclaimed water while the adjacent Ft. Myers Beach facility has excess demand. Through an interconnect, Ft. Myers Beach is able to use excess reclaimed water from Fiesta Village.
City of West Palm Beach – Palm Beach County	Renaissance Project	Stormwater is captured, purified in a settling basin, then transferred to a surface water source. Benefits include alleviating flooding at a lower cost than constructing drainage improvements as well as water supply.
Jupiter Island Holdings, Inc. – Martin County	Irrigation Water Supply	Captured rainwater and treated brackish water are stored in containment ponds and used for landscape irrigation.

Alternative Water Supply Grant Project Examples

AWS Projects Accomplish District Goals

Renaissance Project – In the City of West Palm Beach, the Renaissance Project accomplished several water management objectives. Flooding from ordinary rains often plagued residents in the 375-acre Pineapple Park neighborhood. Stormwater is now pumped away from the community and into a canal where it is treated and sent to a nearby retention basin. After settling, it is pumped into the municipal water treatment plant where it is made safe for drinking. Engineers predict the project will produce up to 300 million gallons of potable water a year.

Jupiter Island Holdings – Jupiter Island Holdings also initiated a project revered as a shining example in innovative water supply. Drinking water from the local water utility had previously been used for all water needs, including irrigation, in the Jupiter Island community. Now, rainwater captured in gutters and brackish water treated through reverse osmosis are stored in ponds and then used to irrigate a golf course, surrounding grounds and landscaped areas. The project accounts for a significant saving of freshwater that would have otherwise been drawn from our shallow aquifer's limited supply.

Funding Requirements

The South Florida Water Management District develops and implements alternative water supply Funding Program Guidelines each fiscal year. The following requirements will need to be met for a project to be considered.

- The project will provide an effective alternative water supply.

PROJECT RANKING CRITERIA	
Criteria	**Guidelines for Scoring**
✔ Consistency with District Plans	Evaluate the extent to which the project complies with or furthers the recommendations of regional water supply plans and initiatives.
✔ Environmental Benefits	The project enhances isolated wetlands, helps protect environmentally sensitive areas, facilitates aquifer protection, or reduces saltwater intrusion.
✔ Reduces Dependence on Traditional Resources	Project replaces or reduces dependence on a traditional water source and/or reduces competition with other water users for the same source.
✔ Overall Cost Effectiveness	Evaluate how the project demonstrates cost effectiveness in facility design and construction, costs relative to additional water availability, and in costs to the end user.

- Funding will be used only for paying capital or infrastructure costs.
- Application for relevant permits will be made prior to project funding.
- Project completion will be within 36 months from the date of the signed cooperative agreement.

Getting Started

Applying for a grant is straightforward. If the proposed project meets the previously described requirements, the applicant should follow these steps:

- To request an application, phone 561-682-6391, fax 561-681-6275. For technical assistance or help completing the form, contact Jane Bucca at 561-682-6791, or e-mail jbucca@sfwmd.gov
- Submit the application on or before the deadline stated in the application. The closing date is generally the first week in April of each year.
- You will receive a letter from the District notifying you of eligibility and listing any concerns or questions staff may have about the project.

Selection Committee Review

Your application will be submitted to a Selection Committee for review and ranking. The selection committee includes one or more representatives of county, municipal, and investor-owned private utilities and may include representatives of agricultural and environmental interests. Recommended rankings are generally completed by August and presented to the District's Governing Board. The Board decides which projects will be funded and the dollar amount of funding.

If project funding is approved, you will receive notification and be asked to sign an executable agreement with the District. Construction of the project must be completed, inspected and approved by the District before the grant funds are made available.

Project Ranking Criteria

The Alternative Water Supply selection committee ranks projects on specific guidelines and eligibility criteria. Project Ranking Criteria are precisely defined each fiscal year, however, the intent and purpose remains the same from year to year. The description given above is generic.

Grant Funding Timelines

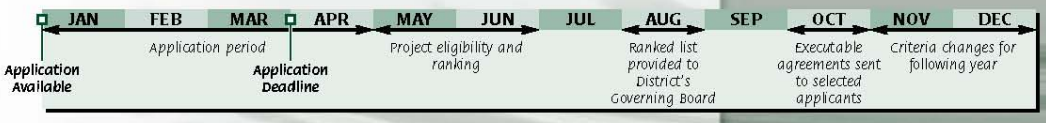
The program funds grants on an annual basis and is managed through a process based on specific timelines as set forth below.

The City of West Palm Beach received grant money to implement an innovative project that
1) relieves neighborhood flooding,
2) enhances wetlands, and
3) provides for a new source of drinking water.

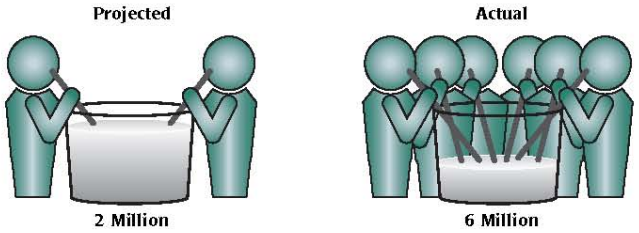
Excess rainwater is pumped from the Pineapple Park neighborhood

Stormwater settles in a retention basin

Water is ultimately made safe for drinking



YEAR 2000 POPULATION



Developing alternative water supplies will increase the availability of freshwater for the environment and a growing population.

Once an application is received, the document is checked for eligibility, then forwarded to the Selection Committee. Applicants are notified of dates for public hearings and encouraged to attend. The Selection Committee scores and ranks the projects which are then presented to the District's Governing Board as part of the budget process. When awards are finalized, the money is encumbered and project monitoring begins.

Water Supply Needs – Now and the Future

Development of alternative water supply sources is consistent with and compliments regional water supply development projects and plans, such as the Comprehensive Everglades Restoration Plan. Use of alternative water supplies reduces the demand for water from regional sources, such as Lake Okeechobee and the Everglades, and allows for current and future water demands to be met, especially in times of drought.

During the 1990s, 834 people moved to Florida every day, and water demand increased by nearly 150 thousand gallons a day. As population continues to grow, so must the development of alternative water supplies. Through the District's commitment to funding partnerships, over 190 million gallons of water have been saved or offset in the last four years. For a sustainable future, there is no better time than now to tap into the Alternative Water Supply Grant program.

– FOR ALTERNATIVE WATER SUPPLY GRANTS & INFORMATION –
Jane Bucca 561-682-6791 or
jbucca@sfwmd.gov
– FOR WATER REUSE INFORMATION –
Mark Elsner 561-682-6156 or
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The South Florida Water Management District is a regional, governmental agency that oversees the water resources in the southern half of the state. It is the oldest and largest of the state's five water management districts.

Our Mission is to manage and protect water resources of the region by balancing and improving water quality, flood control, natural systems, and water supply.

This "Below the Surface" publication on the Alternative Water Supply Grant Program directly supports our mission of water supply.

sfwmd.gov

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MAILING ADDRESS: P.O. Box 24680
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DID YOU KNOW?

- Within the state, 2.7 billion gallons of water are used for products or crops, consumed by humans or livestock, or otherwise removed from the environment daily.
- Water used for outdoor irrigation is estimated to be more than 50% of total household consumption.
- Reuse of reclaimed water and water conservation are major objectives within the state of Florida.
- In our 16-county district, there are 100 reuse systems delivering an average of 190 million gallons of reclaimed water a day.
- District users of reclaimed water include over 47,000 residences, 145 golf courses, 64 parks and 16 schools.
- Today, there are over 25 potable water suppliers in the SFWMD using a brackish water source and reverse osmosis treatment to meet their water supply demands.
- Currently, there are 5 operating aquifer storage and recovery wells in the SFWMD using treated drinking water and partially treated surface water. There are 15 ASR wells under operational testing and over 10 wells are under construction.

Florida's Water
It's Worth Saving

JW11/12.02

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